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PLAIN DIRECTIONS

FOR

Self-preservation from Cholera;

CONTAINING THE BEST MEDICAL ADVICE

BOTH FOR

PREVENTION AND CURE.

*Particularly recommended to Heads of Families,
Teachers of Academies, &c.*

REMARKS ON CHOLERA.

BY HENRY MARSHALL, ESQ. D. I. G.*

[The following remarks are from the pen of a gentleman whose experience entitles him to speak with some confidence on the cholera. *What he here states, are facts which came under his own observation in the island of Ceylon, and must accordingly be admitted to have more weight than any thing that can be said by writers who merely express their individual opinions, however favourable the hypothesis may be on which they are founded.*]

Cholera has always occurred, sporadically, in India, Ceylon, &c. Bontius has described the disease as he saw it in Java. Between the year 1803, when I arrived in Ceylon, and 1819, when it appeared epidemically at Kandy, I had an opportunity of witnessing several cases, all of which terminated fatally. The nature of the disease was indeed not at first duly appreciated. I am aware of other medical officers who witnessed cases of a similar nature. The cases I met with were all either Africans or indigenous inhabitants of India, but Dr. Badenach had a commissioned officer under his care who died of the disease in a few hours.

Cholera was epidemic in the peninsula of India in 1782 or 1783. This epidemic was described by Mr. Curtis as he saw it at Madras by Fra Paolina da San Bartolomeo, a Carmelite Friar, as it occurred in the neighbourhood of Travancore; by

* Mr. Marshall had the superintendence of the medical concerns of the army, in the central provinces of Ceylon, when cholera appeared in that Island.

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Dr. Girdlestone, as it appeared at Madras in a regiment to which he was surgeon; and by Sonnerat as it was reported to have happened in the neighbourhood of Pondicherry. Dr. Girdlestone denominates it a "*spasmodic disease*," and Sonnerat calls it "*indigestion*." The latter author informs us that 60,000 inhabitants died of the disease near to Pondicherry.

The disease became epidemic in August, 1817, about 100 miles to the northward of Calcutta. In December, 1818, it reached Jafna, in Ceylon, and about the 26th or 27th of January it appeared at Colombo, and the first case which occurred among the troops in the Kandyan Province happened at Kandy on the 25th February. Between this date and the 4th May, when the epidemic ceased in the Kandyan Province, it appeared in fifteen of about thirty military stations.

In the Kandyan territory, commissioned officers were nearly exempted from its influence; and I do not recollect having seen a female or a child affected by it.

The different classes of the troops, including Europeans, Malays, Indians, and Africans, were all liable to the disease. Unlike the cause of intermittent fever, it attacked Africans as generally, and perhaps fully as severely, as any other species of troops. It is, I presume, pretty generally known that Africans are not liable to be affected with intermittent fever. With the exceptions above stated, Europeans and other classes of people who enjoyed the means of living comfortably, and who seemed to have a sufficient degree of prudence to induce them to consult their own welfare, fell under the influence of cholera nearly as severely as the comparatively naked, abstemious, and improvident Indians.

Cholera did not appear to be in any degree affected by the weather, or by considerable transitions of temperature. It prevailed with as much severity while torrents of rain were falling as it did when the atmosphere was dry and parching. Every endeavour to trace a connexion between the extension of the disease and an obvious condition of the atmosphere, was completely futile. In no one instance did it seem to prevail among people residing in the same house or barrack, so as to excite a suspicion that the contact of the sick with the healthy contributed to its propagation.

As it frequently affected only a few individuals among considerable numbers similarly situated, it may be inferred that there were some concurring conditions of the constitution which influenced the supervention of the disease. The nature, however, of that aptitude of the system which may have dis-

posed or concurred towards the existence of the disease, seemed to be quite inexplicable.

Cholera in general supervened suddenly, and without any appreciable previous indisposition. For the most part the symptoms which first arrested the attention of a patient were vomiting and purging. The matter thrown up by vomiting was primarily the ordinary contents of the stomach, and eventually it was watery and colourless. The stools consisted in general of an opaque whitish fluid, resembling barley water. The primary symptoms appeared to supervene more frequently between the hours of two and four in the morning, than during any other period of the day. Prostration of strength soon supervened, with cramps, chiefly in the legs, and coldness of the skin. In some instances head-ache was present, but this was not a general symptom. Great thirst and uneasiness about the precordia were never absent. As the progress of the disease advanced, the countenance became collapsed, and the eyes sunk, the action of the heart and arteries grew weak, and the pulsation quicker than natural. The nails of the fingers and toes became livid, and the skin cold, clammy, and shrivelled. The breath was cold, and when a thermometer was placed under the tongue, the mercury frequently stood at 94 degrees, being 4 degrees below the natural temperature of the body. The tongue was often clean, sometimes it was white. In a great proportion of cases the senses, particularly the sense of hearing, became less acute than natural, when the above symptoms were violent. Eventually the voice became comparatively indistinct. The respiration was frequently hurried and anxious, and before death there was commonly great anguish and agitation. In many instances the intellectual powers appeared to remain to the last little impaired. Coma, or a state of insensibility resembling it, supervened in some cases before death. The duration of the disease in fatal cases varied from 2 to 24 hours among the Malays, Africans, and Indians, and the mean period may be estimated at about from 12 to 24 hours. The European constitution did not yield so rapidly to the fatal effects of the disease as that of the blacks; and the whites seemed to suffer under more severe pain and uneasiness than either the indigenous or imported blacks.

In a disease which runs so rapid a course, it may be supposed that notwithstanding every care on the part of medical officers, the complaint had sometimes made considerable progress before a patient was admitted into hospital. Among the blacks, some of these cases did not complain of much un-

easiness, although the awful progress of the disease was strongly marked by great prostration of strength, a collapsed cadaverous countenance, cold clammy skin, and weak thready pulse. The skin was sometimes not only clammy and cold, but it was soft, and felt more like a wet hide than an animated substance.

When recovery took place, the improvement commonly became apparent before 24 or 30 hours had elapsed from the commencement of the disease. The warmth of the body returned, the pulse rose, the spasms, vomiting, and purging ceased. A state of re-action followed, attended with thirst, furred tongue, hot dry skin, with copious brown or pitchy coloured stools. Recovery did not always follow a stage of re-action. Sometimes the tongue became brown, dry and hard, teeth covered with sordes, the pulse weak, the breathing difficult, accompanied with general listlessness and moaning; insensibility supervened, and death soon followed.

The treatment indicated and adopted was to restore heat to the system, and to excite the action of the heart and arteries. This is not a place to enter into a detail upon the remedial means; suffice it to say that very energetic measures are required. Among the various means employed to recall heat to the system, we found the following the most practicable and effectual: A blanket was spread over a rattan-bottomed couch, and upon this blanket the patient was laid in a state of nudity. He was carefully covered with blankets, which were sometimes dipped in warm water and changed as circumstances required. Under the couch vessels containing hot water were placed over other vessels filled with embers. By this means the patient had all the advantages which could be expected from a permanent steam bath. Tin bottles filled with hot water, were applied to the sides and feet. Enemas of warm conjee (rice-water) were sometimes exhibited. These means seemed to be sometimes beneficial, at others, however, no improvement followed. The bodies of a number of the patients seemed to have the power of generating cold, (if I may be allowed to use such an expression) for we could with more ease have raised the temperature of an inanimate body to the natural heat of the human system, than we could that of some of our patients. This phenomenon is no doubt to be attributed to excessive evaporation from the skin. It may be observed that although the skin was cold, the patients complained of internal heat, and often stated also that hot applications were hurtful to them. As we became better acquainted with the disease, more dependance was placed on the exhibition of internal sti-

mulants and venesection, and less upon the external application of heat than in the commencement of the disease.

With the view of stimulating the extreme vessels of the skin, friction of the body with oil of turpentine were frequently had recourse to, and sometimes flannel cloths dipped in hot water were applied to the scrobiculis cordis as a vesicatory.

To excite the vascular system, and to accomplish other indications, various agents and means were employed, such as draughts of laudanum, with oil of peppermint, arrack and hot water, (toddy) cordials of various kinds, large doses of calomel in powders, venesection, &c. In the application of these means, medical practitioners must be guided by their own judgment and professional experience.

The disease sometimes supervened with such extreme violence, as apparently to render the employment of remedial means unavailing. In such instances there is often little or no vomiting, purging, or spasms; the nervous power seems to become suddenly exhausted, the skin is insensible to external agents, the stomach to internal stimulants, and death ensued in from one to four hours. I have never seen a man die of this disease under a period of an hour and three quarters, but I am informed by Dr. Daun that he had two cases under his care who expired in a still shorter period; and, what was very remarkable, the two patients stood in the relation of husband and wife, and both died in one morning.

Where the cases were less severe, medical means were decidedly beneficial, and the best evidence I can adduce in support of this opinion is, that I never knew a person recover who had not received medical assistance. This opinion seems also to have been entertained by Mr. Ogilvy, Secretary to the Medical Board, Bombay, for he says, "Of these cases, 1294 sick had been without receiving medicine or medical aid, and there is reason to believe that of these every individual perished."

The Indian Cholera, as it is sometimes called, appears not to be essentially different from cholera as it occurs in this and all other countries. The former disease is distinguished from the common cholera chiefly by its extreme violence, great mortality, and occasionally epidemic existence. Late events have taught us that cholera may be as severe and as general in high latitudes as between the tropics. I consider it, therefore, impossible for a medical practitioner to speak decisively from having seen one or even a few cases of cholera in this country, and to say whether they are precursors of "the epi-

demic cholera" or not. That the disease is ever propagated by means of personal contact, or by the clothes of the sick, has not, so far as I know, been satisfactorily proved. The quality of contagion was never attributed to the disease in Ceylon, and I believe no where did it occur in greater severity.

I am aware that an attempt has been made to distinguish the ordinary cholera of this country from the "epidemic cholera," by means of the colour or quality of the discharges from the bowels. In the former it is said the discharge is chiefly bile, while in the latter it is stated to bear no trace of bile, but to be colourless and watery. How far is this alleged diagnosis well founded? I am disposed to believe that in all severe cases of cholera, whether it be the cholera of this country or the epidemic cholera, the secretion of bile is either suppressed or the fluid is retained in the gall bladder. Indeed, the exercise of almost all the functions of the body seems to be greatly impaired or suppressed, except that of the mucous membrane of the stomach and intestines, which secretes a large quantity of serous fluid. According to Celsus, the discharge downwards in cholera is "at first like water, afterwards as though fresh flesh had been washed in it—sometimes black or variegated." Dr. Mackintosh says, in his *Elements of Pathology, &c.* that in cholera "the discharge from the bowels in this country is generally watery, containing fæces very thin and offensive; occasionally the discharge looks like water in which meat has been soaked." Dr. Pers-ton, surgeon to the 26th regiment, had a case of cholera under his care in Dublin in 1826, which terminated fatally in about thirteen hours. In his report of the case he states that "the matter passed by stool had a dirty grey appearance."

It would appear that in some of the less violent cases of Indian or epidemic cholera, bile continues to be secreted or discharged. "The bile," says Mr. Orton, appears in excess only in the mildest cases." Mr. Curtis makes a similar statement; he says, "The cases which appeared after this were all of a different nature, much less severe, and none turned out fatal. They were all of them combined with bilious accumulations." Although the discharge from the bowels may not indicate that the Indian cholera is specifically different from common cholera, it is in general a certain mark of the degree of the disease, in whatever country a case may happen. In extremely severe cases there is no bile, and where the symptoms are not violent it is perhaps never absent. This is a highly important distinction, in so far as the practice is concerned, and it ought never to be lost sight of by a practitioner.

BOARD OF HEALTH, COLLEGE OF PHYSICIANS.

Symptoms and Treatment.

Giddiness, sick stomach, nervous agitation, intermitted, slow, or small pulse, cramps beginning at the tops of the fingers and toes, and rapidly approaching the trunk, give the first warning.

Vomiting or purging, or both these evacuations, of a liquid like rice-water, or whey, or barley-water, come on ; the features become sharp and contracted, the eye sinks, the look is expressive of terror and wildness ; the lips, face, neck, hands, and feet, and soon after the thighs, arms, and whole surface, assume a leaden, blue, purple, black, or deep brown tint, according to the complexion of the individual, varying in shade with the intensity of the attack. The fingers and toes are reduced in size, the skin and soft parts covering them are wrinkled, shrivelled, and folded ; the nails put on a bluish pearly white ; the larger superficial veins are marked by flat lines of a deeper black ; the pulse becomes either small as a thread, and scarcely vibrating, or else totally extinct.

The skin is deadly cold, and often damp, the tongue always moist, often white and loaded, but flabby and chilled, like a piece of dead flesh. The voice is nearly gone ; the respiration quick, irregular, and imperfectly performed. The patient speaks in a whisper. He struggles for breath, and often lays his hand on his heart to point out the seat of his distress. Sometimes there are rigid spasms of the legs, thighs, and loins. The secretion of urine is totally suspended : vomiting and purgings, which are far from being the most important or dangerous symptoms, and which in a very great number of cases of the disease have not been profuse, or have been arrested by medicine in the attack, succeed.

It is evident that the most urgent and peculiar symptom of this disease is the sudden depression of the vital powers ; proved by the diminished action of the heart, the coldness of the surface and extremities, and the stagnant state of the whole circulation. It is important to advert to this fact, as pointing out the instant measures which may safely and beneficially be employed where medical aid cannot immediately be procured. All means tending to restore the circulation and maintain the warmth of the body should be had recourse to without delay. The patients should always immediately be put to bed, wrapped up in hot blankets, and warmth should be sustained by other external applications, such as repeated frictions with flannels and camphorated spirits ; poultices of mustard and

linseed (equal parts) to the stomach, particularly where pain and vomiting exist; similar poultices to the feet and legs, to restore their warmth. The returning heat of the body may be promoted by bags containing hot salt or bran applied to different parts of it. For the same purpose of restoring and sustaining circulation, white wine whey, with spice, hot brandy and water, or sal volatile, in the dose of a teaspoonful in hot water, frequently repeated, or from five to twenty drops of some of the essential oils, as peppermint, cloves, or cajeput, in a wine glass of water, may be administered; with the same view, where the stomach will bear it, warm broth with spice may be employed. In very severe cases, or where medical aid is difficult to be obtained, from 20 to 40 drops of laudanum may be given, in any of the warm drinks previously recommended.

These simple means are proposed as resources in the incipient stage of the disease, where medical aid has not yet been obtained.

HENRY HALFORD, President of the Board.

PRACTICAL DIRECTIONS IN REGARD TO CHOLERA.

BY GEORGE HAMILTON BELL, Esq.

[In a very able letter addressed to Sir Henry Halford in consequence of what he has stated in the preceding article, the following remarks are published by Mr. Bell. He appears to have more practical notions in regard to cholera, than any of the others whose productions have come under our notice, and we most strenuously recommend to all who can afford it to put themselves in possession of his treatise, recently published in Edinburgh at 5s. 6d. We have to apologise to Mr. Bell for the freedom we have used in appropriating so much of his Letter to Sir Henry Halford, and our only excuse for having done so, is, that his valuable hints on the subject may be more widely disseminated in the West of Scotland, than they had any chance of otherwise being.]

It was not my intention to have added any thing to what I have already published concerning this disease; and I should have adhered to that intention, had it not occurred to me, that, as the regulations in the Gazette are directed rather to the prevention of the spreading of the disease by means of

contagion, than to the best means of relieving the sufferers, there was still room for some practical directions likely to prove serviceable to the community, and in a particular manner to the inhabitants of the city in which I reside. In offering these suggestions, I make no pretensions to any superior medical skill ; but having accidentally seen more of the disease, I believe, than almost any of my professional brethren in this city, and considering it to be the bounden duty of every man who has had such opportunities, to do his utmost to alleviate the sufferings of those who may be attacked, I venture, under the influence of that feeling, and avoiding all controversial topics, to submit the following hints for your consideration:—

I. It appears to me very desirable, to have a popular description of the disease as may enable us to recognize it immediately on its accession. Much anxiety and needless alarm would be avoided, were the public sufficiently impressed with the distinction between this formidable distemper, and those derangements of the bowels with which, from the name it has unluckily received, and from some of its less important symptoms, it is too apt to be confounded. Had we now to choose a name for the disorder, it would certainly be more appropriate to call it *Morbus Asphyxia*, or the *pulseless* disease, —the failure of the pulse, and a suspension of the healthful circulation of the blood, being much more characteristic of the disorder than any other symptom with which I am acquainted. The approaches of this morbid condition, however, are gradual and insidious. The patient feels lassitude at first, perhaps headache and ringing in the ears, accompanied by one or two lax stools. But it must be borne in mind, that the bowels are not invariably so affected ; and even that the preliminary symptoms which I have mentioned are hardly deserving of notice, except when cholera prevails in the neighbourhood.

The symptoms which more properly belong to the disease are blue lips and nails ; an earthy or blue colour of the skin, the surface appearing shrunken ; while the countenance is sunk and the eye falls deep in their sockets, and are surrounded by a dark ring. The extremities become cold, and the pulse weak ; it may even be imperceptible. There is oppression of the chest, and generally a burning sensation at the pit of the stomach. Severe vomiting and purging, of a fluid which is something like rice-water ; urgent thirst, accompanied probably by violent spasms in the extremities, and excruciating spasmodic pains in the belly, supervene. The patient tosses about his body, and falls into a state of indescribable agony ; and although the mind remains comparatively entire, he has very much the appearance of an animated corpse.

A very few hours will bring the sufferer to this state; which I need scarcely add is one of imminent danger, and little likely to be confounded with any of the ordinary maladies to which the inhabitants of this country are accustomed. And no one can see an individual reduced to this extremity, without being satisfied that not one moment is to be lost in sending for medical assistance.

II. Medical advice, however may not always be at hand ; and although safety is scarcely to be hoped for in absence of a professional man, it is nevertheless of great importance to point out to the friends of the patient, what steps may be safely taken between the accession of the disease and the arrival of the physician:—

The patient ought to be immediately placed in warm blankets, and surrounded with bottles of hot water, bags of hot sand or salt ; and every other means of applying dry heat which may be within reach, ought to be resorted to. The whole body ought to be rubbed with hot flannel, and the belly should be covered with mustard poultices, which should also be applied to the calves of the legs.

I have seen so little good to result from the application of the hot water bath, that, even if it should be at hand, I should not put a patient into it. One great objection to the application of hot water is the fatigue which it occasions the patient, besides that any benefit attending it is generally neutralized by the difficulty of drying the body, or by the evaporation which takes place during that process.

Laudanum is usually to be found in every house, and certainly ought to be so during the prevalence of this disease ; but the friends of the patient must be cautious of administering it in large doses without the sanction of a medical man. A tea-spoonful of laudanum, added to six table-spoonfuls of brandy, may be prepared, however ; and one table-spoonful of this mixture may be administered in half a wine glassful of hot water every quarter of an hour,—five drops of essence of peppermint and ten drops of sulphuric ether being added to each dose of the brandy and laudanum. In case the stomach reject the liquid, pills containing three grains of camphor and half a grain of opium may be given ; and if the irritability of the stomach be so great that it rejects all that is swallowed, a warm glyster of arrow-root, with a tea-spoonful of laudanum in it, should be injected into the bowels.

As a measure of precaution, all these remedies ought to be at hand ; but in towns, of course, medical attendance will probably be obtained in time to admit of their being applied under sanction of a professional man.

Early bleeding is of so much importance in this disease, that,

if possible, it should be resorted to even before the arrival of the regular medical attendant of the family. The rule is to bleed, until the blood, which is black and thick when a vein is first opened, assumes a red and more natural colour, and until the oppression of the patient is relieved. In the course of my practice I have always found that the danger is, that too small rather than too large a quantity of blood is removed.

The greater part of the course of treatment just prescribed, may be adopted in almost every case, and, if promptly followed, the most salutary effects may be expected. But, as I have already said, the sooner that a medical man is called, so much the better is the patient's chance of surmounting the disease. As to the minute details of medical treatment, it would be foreign to my present purpose to enlarge upon them.

III. Could we make even a plausible conjecture as to the remote cause of Cholera, we might have some hope of being able to resist the advances of the disease by precautionary measures. But, in the present state of our information and experience, an absolute preventive against an attack of this extraordinary malady, is a desideratum which we can hardly expect to see supplied. At the same time, while we are thus unable to arrest its progress, we are warranted in giving the character of predisposing causes, to certain circumstances which are within our reach. In India, it has been almost invariably found, that regular habits, nourishing diet, and cleanliness, gave those exposed to the disease the best chance of escape; while exposure to fatigue or to cold, particularly during sleep, poor diet, and, above all, intoxication and dissipated habits, have been found powerfully to predispose to Cholera. There is also reason to believe, that persons living in low ill-aired situations, and sleeping on the ground floors, or in damp floors near the ground, are more liable to the disease than those who are less unfortunate in their habitations.


In this country, attention to clothing and to within door comforts, will be of even more consequence than within the tropics. Every endeavour therefore ought to be made, by the upper classes of society, to prepare the poor for resisting the disease, by providing them with warm clothing, and, if possible, with warm and well-aired houses. It is said, that in Vienna, where proportionally more of the upper classes have suffered than in the other towns in which Cholera has appeared, it is the custom for this class to inhabit the lower storeys, and to leave the upper part of the house to the humbler classes of society. If this fact be established, it would justify us in transferring our beds, where that can be conveniently done, from the lower to the upper flats.

Nourishing diet is unquestionably very useful as a preventive,

white crude fruit and undressed vegetables, and in general all food having a tendency to produce disorder in the stomach and bowels, ought to be avoided.

Debauchery of all kinds may be regarded as almost the certain means of provoking an attack of the disease, while it prevails in a town or district. Powerful purgatives are also dangerous at such a time; and, in general, I should recommend it to that pretty numerous class in the community who are in the practice of dosing themselves with favourite medicines, to abstain as much as possible from this indulgence during the prevalence of cholera. For although at such a time attention to the state of the bowels is of much importance, yet as certain of the ordinary medicines are more likely to be prejudicial than others, or to predispose to attacks of the disease, it is particularly desirable, while the danger exists, that the slighter, as well as the more important derangements of the system, should be treated by medical men.

The disease in India was usually confined to a particular part of the city, or camp, or district, while those residing beyond the tainted limits were safe, for the time, from attack. If the same phenomenon should be exhibited when the disease makes its appearance in this country, safety may occasionally be found in deserting the quarter of the town or district in which the disease particularly manifests itself. But before resorting to this expedient, the habits of the disease would require to be well ascertained; for any thing like a precipitate removal, unless it be to a quarter indisputably beyond the limits to which the disease is confined, might prove more prejudicial than it would be to remain and face the danger—using such precautions against the predisposing causes as have been suggested.

 Those who may feel desirous of possessing more ample information on the subject, are recommended to purchase the pamphlet of thirty-six closely printed pages, published by W. R. M'Phun, at the very moderate price of 4d. He will give a liberal deduction off the fourpenny pamphlet, as well as off this tract, to gentlemen who buy them for 'gratuitous distribution.

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